









F16. 3

In re. application of Yuri V. Melnik, et al. Express Mail No. EL828015470US Atty. David G. Beck (415) 393-2404 Atty. Docket No. 23600-700 of 3 Page FLUSH/FILL REACTOR INTRODUCE HALIDE GAS GaN GROWN ON 409 WITH INERT GAS INTO Ga SOURCE TUBE SUBSTRATES 417 LOWER GROWTH ZONE TRANSPORT GALLIUM TEMPERATURE TO HEAT SUBSTRATES CHLORIDE TO GROWTH ACHIEVE RAPID ZONE **CRYSTAL GROWTH** STOP HCI AND AMMONIA 405 DELIVER AMMONIA GAS MELT Ga SOURCE GAS FLOW AND COOL TO GROWTH ZONE **CRYSTALS HEAT Ga SOURCE** AMMONIA GAS AND 407 415 (2 TEMPERATURE **GALLIUM CHLORIDE** F16.4 RANGES) REACT INTRODUCE HALIDE GAS LOWER GROWTH ZONE FLUSH/FILL REACTOR INTO Ga SOURCE TUBE TEMPERATURE TO WITH INERT GAS & SELECTED AI SOURCE ACHIEVE RAPID TUBE **CRYSTAL GROWTH** GALLIUM CHLORIDE AND HEAT SECOND AI HEAT SUBSTRATES ALUMINUM TRICHLORIDE SOURCE FORMED 613 GALLIUM CHLORIDE AND INTRODUCE HALIDE GAS ALUMINUM TRICHLORIDE MELT Ga SOURCE INTO SECOND AI TRANSPORTED TO SOURCE TUBE **GROWTH ZONE** TRANSPORT ALUMINUM **HEAT Ga SOURCE DELIVER AMMONIA GAS** TRICHLORIDE FROM (2 TEMPERATURE TO GROWTH ZONE SECOND AI SOURCE TO RANGES) **GROWTH ZONE** 617 GAS FLOW TO FIRST AI AlGaN GROWN ON HEAT ONE AI SOURCE SOURCE STOPPED AND SUBSTRATES SOURCE WITHDRAWN STOP HCI AND AMMONIA GAS FLOW AND COOL **CRYSTALS** 421 F16. 6

